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(54) Title: REUSABLE LENS MOLDS, METHODS OF USE THEREOF AND OPHTHALMIC LENSES

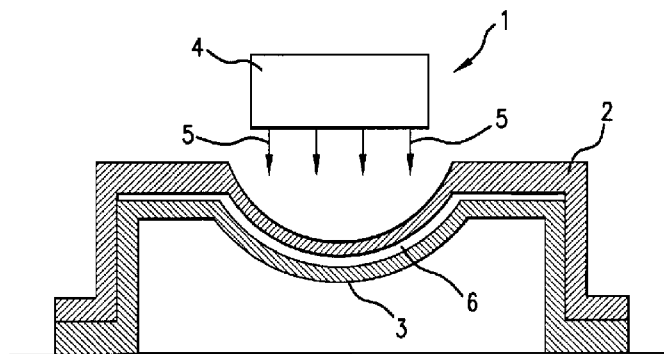


FIGURE 1

(57) Abstract: Described herein are devices (1) for producing ophthalmic lenses including at least one mold half (2, 3) defining an optical surface where the mold half (2, 3) is made from a polymer that includes an aromatic polyimide, a polyphenylene, or a combination thereof. The devices (1) exhibit numerous advantages including, but not limited to, good chemical resistance, durability, machineability, and UV absorbing properties. Also described are methods for producing ophthalmic lenses using the devices described herein. The ophthalmic lenses produced with the devices (1) described herein exhibit excellent optical properties when compared to lenses produced from conventional molds.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
 INV. B29D11/00 B29C33/40 B29C35/08
 ADD. B29K79/00 C08L65/02 C08L79/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 B29D B29C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 620 717 A (WICKES GEORGE L [US] ET AL) 15 April 1997 (1997-04-15) figures 1-8 column 2, line 66 - column 3, line 36 column 3, line 63 - column 5, line 25 column 5, line 60 - column 6, line 11 -----	1-6, 17-29
X	US 2004/119174 A1 (HOFMANN GREGORY J [US] ET AL) 24 June 2004 (2004-06-24) paragraphs [0006] - [0012], [0014], [0017] - [0019] -----	1-6, 17-29
A	WO 2007/101858 A2 (SOLVAY ADVANCED POLYMERS LLC [US]; EL-HIBRI MOHAMMAD JAMAL [US]; MYRIC) 13 September 2007 (2007-09-13) page 1, line 11 ----- -/--	1

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search 12 April 2011	Date of mailing of the international search report 20/04/2011
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Baran, Norbert

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2009/067990

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

Described herein are devices (1) for producing ophthalmic lenses including at least one mold half (2, 3) defining an optical surface where the mold half (2, 3) is made from a polymer that includes an aromatic polyimide, a polyphenylene, or a combination thereof. The devices (1) exhibit numerous advantages including, but not limited to, good chemical resistance, durability, machineability, and UV absorbing properties. Also described are methods for producing ophthalmic lenses using the devices described herein. The ophthalmic lenses produced with the devices (1) described herein exhibit excellent optical properties when compared to lenses produced from conventional molds.

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

1-29

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/067990

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 113 224 A (CLARK JAMES A ET AL) 12 September 1978 (1978-09-12) figures 1-9 -----	1-29
A	US 6 800 225 B1 (HAGMANN PETER [DE] ET AL) 5 October 2004 (2004-10-05) claims 37-39,70; figures 1,10,11 -----	1,2,4-6, 17-19,22
A	EP 0 412 891 A2 (NISSAN MOTOR [JP]; ASAHI CHEMICAL IND [JP]) 13 February 1991 (1991-02-13) page 4, lines 13-15 -----	1,7-10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2009/067990

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		DE 69027819	T2 27-02-1997
		ES 2091810	T3 16-11-1996
		US 5156754	A 20-10-1992

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 2, 4-6, 17, 18(completely); 1(partially)

A device for producing an ophthalmic lens with a mold half made from an aromatic polyimide.

2. claims: 3, 11-16, 22-25, 27-29(completely); 1, 19-21, 26(partially)

A device for producing an ophthalmic lens with a mold half made from an alternative polymer (a specific aromatic polyimide of claim 11) substantially preventing the reflection and transmission of UV light.

3. claims: 3, 7-10, 22-25, 27-29(completely); 1, 19-21, 26(partially)

A device for producing an ophthalmic lens with a mold half made from a further alternative polymer (polyphenylene) substantially preventing the reflection and transmission of UV light.

4. claims: 3, 7-16, 22-25, 27-29(completely); 1, 19-21, 26(partially)

A device for producing an ophthalmic lens with a mold half made from a further alternative polymer (a combination of an aromatic polyimide and polyphenylene) substantially preventing the reflection and transmission of UV light.
